

Appl. No. 09/833,098
Amdt. dated August 6, 2004
Reply to Office Action of May 17, 2004

AMENDMENTS TO THE CLAIMS

Claims 1-21 were canceled and new claims 22-43 were presented in the Preliminary Amendment. Claims 22-24 were canceled in Amendment dated January 20, 2004.

Please cancel claims 26, 28, 32, 34 and 35 without prejudice and disclaimer of the subject matter therein, and amend claims 25, 27, 33, 36, 37, 42, and 43 as set forth in the following listing of the claims.

Claims 1-24 (canceled)

25. (currently amended) An overvoltage protection device for an electronic apparatus having a plug-in device which has at least one plug-in element and is mountable on a housing of the electronic apparatus, wherein a protection board (9) having a spark gap to dissipate overvoltages is arranged on the plug-in element (3); wherein the protection board (9) forms the spark gap together with the plug-in element (3); wherein the protection board (9) has an electrically conductive structure (19, 22) forming the spark gap; wherein the electrically conductive structure of the protection board (9) has a form of a conductor track, with a zone (27, 28; 31) of the conductor track

which is free of solder resist being arranged in a vicinity of an opening (13) accommodating a plug-in element (5), and wherein the zone (31) which is free of the solder resist is formed in a solder land (30), which surrounds the opening (13), in the solder resist (29).

26. (cancel)

27. (currently amended) An overvoltage protection device for an electronic apparatus having a plug-in device which has at least one plug-in element and is mountable on a housing of the electronic apparatus, wherein a protection board (9) having a spark gap to dissipate overvoltages is arranged on the plug-in element (3); wherein the protection board (9) forms the spark gap together with the plug-in element (3); wherein the protection board (9) has an electrically conductive structure (19, 22) forming the spark gap; wherein the electrically conductive structure has a form of a recess which is free of solder resist, and/or [[an]] a plurality of openings (27, 28) through the protection board (9), wherein the recess and/or the plurality of openings (27, 28) which are free of the solder resist is arranged about an opening (13) in a vicinity of a plug pin (5) to be protected.

28. (cancel)

29. (previously presented)

An overvoltage protection device for an electronic apparatus having a plug-in device which has at least one plug-in element and is mountable on a housing of the electronic apparatus, wherein a protection board (9) having a spark gap to dissipate overvoltages is arranged on the plug-in element (3); wherein the protection board (9) has at least two conductor tracks (19, 20; 21, 22) which are located one above another, are at different potentials, and are routed to a board edge (23), with a thickness of an insulation layer (24, 25) which is arranged between the two conductor tracks (19, 20; 21, 22) being selected such that the spark gap is formed by uninsulated ends of the two conductor tracks (19, 20; 21, 22) at the board edge (23).

30. (previously presented) The

overvoltage protection device as claimed in claim 29, wherein a shape of the conductor tracks (19, 20, 21, 22) which are routed to the board edge (23) is selected such that conductor tips (34) are produced at the board edge (23).

31. (previously presented) The

overvoltage protection device as claimed in claim 29, wherein the board edge (23) is formed by at least one opening (14) through the protection board (9).

32. (cancel)

33. (currently amended) The overvoltage protection device as claimed in claim [[32]] 25, wherein the protection board (9) is fitted with a suppression device (10; 15, 16) to improve electromagnetic sensitivity of the electronic apparatus (1); and wherein the suppression device (10) is a varistor.

34. (cancel)

35. (cancel)

36. (currently amended) The overvoltage protection device as claimed in claim 35, wherein An overvoltage protection device for an electronic apparatus having a plug-in device which has at least one plug-in element and is mountable on a housing of the electronic apparatus, wherein a protection board (9) having a spark gap to dissipate overvoltages is arranged on the plug-in element (3); wherein the protection board (9) is fitted with a suppression device (10; 15, 16) to improve electromagnetic sensitivity of the electronic apparatus (1); wherein the suppression device comprises a capacitor (10) which is arranged outside the housing (1, 2) of the electronic apparatus (1) and is electrically connected firstly to the plug-in element (5) of the plug-in device (3); and secondly to potential of the electrically conducted housing (1, 2); wherein a

first capacitor plate (16) of the capacitor (10) is arranged in
or on the plug-in device (3); and the first capacitor plate (16)
is formed from the plug-in element (5).

37. (currently amended) The overvoltage
protection device as claimed in claim 35, wherein An overvoltage
protection device for an electronic apparatus having a plug-in
device which has at least one plug-in element and is mountable on
a housing of the electronic apparatus, wherein a protection board
(9) having a spark gap to dissipate overvoltages is arranged on
the plug-in element (3); wherein the protection board (9) is
fitted with a suppression device (10; 15, 16) to improve
electromagnetic sensitivity of the electronic apparatus (1);
wherein the suppression device comprises a capacitor (10) which
is arranged outside the housing (1, 2) of the electronic
apparatus (1) and is electrically connected firstly to the plug-
in element (5) of the plug-in device (3), and secondly to
potential of the electrically conductive housing (1, 2); wherein
a first capacitor plate (16) of the capacitor (10) is arranged in
or on the plug-in device (3); and the first capacitor plate (16)
is formed by one of the conductor tracks (15) which are arranged
on the protection board (9) and are in a form of conductor
surfaces, said conductor track (15) is arranged alongside the
plug-in element (5) and is electrically connected to said
element, and wherein the electrically formed housing (1), which
is connected to ground, of the electronic apparatus is used as a
second capacitor plate.

38. (previously presented) The overvoltage protection device as claimed in claim 37, wherein a second conductor surface (18) which is arranged on the protection board (9) and is electrically connected to the housing (1, 2) forms a second capacitor surface with the housing (1, 2).

39. (previously presented) The overvoltage protection device as claimed in claim 38, wherein the electrical connection between the second conductor surface (15) of the protection board (9) and the housing (1, 2) is produced by at least one fastening means (4) for holding the protection board (9) and/or the plug-in device (3) on the housing (1, 2).

40. (previously presented) The overvoltage protection device as claimed in claim 38, wherein insulation (17) is arranged between the second conductor surface (18), which is formed on a surface of the protection board, and the outside of the housing (1, 2).

41. (previously presented) The overvoltage protection device as claimed in claim 38, wherein the conductor surface (16) surrounding the plug-in element (5) is arranged on the protection board (9) such that it is placable and made contactable on a side of the plug-in device (3) facing the housing (1).

42. (currently amended) The overvoltage protection device as claimed in claim [[34]] 36, wherein a first capacitor plate (16) of said capacitor and of additional capacitors of said suppression device is provided for each plug-in element (5), and each of the first capacitor plates (16) is electrically isolated from one another.

43. (currently amended) The overvoltage protection device as claimed in claim [[32]] 36, wherein the suppression device has a plurality of capacitors of which a first capacitor plate (16) of a respective capacitor is provided for each plug-in element (5), and each of the first capacitor plates (16) is electrically isolated from one another.